

TITLE
TOUGHENED POLYOXYMETHYLENE-POLY(LACTIC ACID)
COMPOSITIONS

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Abstract

Toughened polyoxymethylene-poly(lactic acid) resin compositions comprising polyoxymethylene, poly(lactic acid), and an impact modifier comprising an ethylene copolymer impact modifier made from monomers (a) ethylene; (b) one or more olefins of the formula $\text{CH}_2=\text{C}(\text{R}^1)\text{CO}_2\text{R}^2$, where R^1 is hydrogen or an alkyl group with 2-8 carbon atoms and R^2 is an alkyl group with 1-8 carbon atoms, such as methyl, ethyl, or butyl; and (c) one or more olefins of the formula $\text{CH}_2=\text{C}(\text{R}^3)\text{CO}_2\text{R}^4$, where R^3 is hydrogen or an alkyl group with 1-6 carbon atoms, such as methyl, and R^4 is glycidyl. The ethylene copolymer impact modifier may further be made from carbon monoxide monomers. The compositions may further comprise one or more ethylene/acrylate and/or ethylene/vinyl ester polymers, ionomers, and cationic grafting agents.